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ELECTRICAL ACCESSORY

The present application is a continuation-in-part application of US Patent Application filed on 4 February 2004 by *Lau et al* (the contents of which are incorporated
10 herein for reference as if wholly repeated here). A copy of the text of the description and drawings (but not the claims and abstract) of *Lau et al* is attached at the end of the description as Appendix (pages 10-A1 to 10-A25).

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FIELD OF THE INVENTION

The present invention relates to an electrical accessory. In particular, the accessory may preferably be used with a conventional electrical appliance.

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BACKGROUND OF THE INVENTION

There is a large variety of electric appliances having different types of detachable electric cords to suit different needs. Most such electric cords have two plug members connected by an electric cable, in which one
25 of the plug members is connectable to the electric appliance, while the other plug member is connectable to an electric source, e.g. a mains socket.

One shortcoming with such a conventional arrangement
30 is that once the electric cord is engaged with the

5 electric appliance, it is usually very difficult to
detach the plug member from the electric appliance. This
can be very dangerous if the electric cable is
accidentally pulled when the electric appliance is
operating. For instance, if a person trips over by the
10 electric cable of an operating electric deep fryer or
kettle, the whole appliance unit can be turned over and
the contents, e.g. hot oil or boiling water, may be
poured out of the deep fryer or kettle, possibly causing
serious injuries to the person or other people around.

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Ways have thus been proposed to overcome or at least
mitigate such shortcomings. In particular, US Patent No.
6,568,942 issued to *Lau et al.* (the contents of which are
incorporated herein for reference as if wholly repeated
20 here) discloses an electric appliance with a body member
and a detachable electric cord. The body member includes
a connecting portion having at least one pin member
extended therefrom. The electric cord includes at least
a first plug member and a second plug member which are
25 electrically connected with each other. The first plug
member is electrically connectable to an electric source,
e.g. the mains socket, and the second plug member is
releasably engageable with the connecting portion of the
body member by a magnetic attracting force between them.
30 The pin member includes a taper end surface, and the

5 second plug member includes at least one aperture sized to receive the pin member of the connecting portion of the body member, and $\frac{\text{width of the aperture}}{\text{width of the pin member}}$ is in the range of 1.1 to 5.

10 Despite the availability of such an easily detachable electric cord, there is still in existence a large variety of electric appliances already manufactured and equipped with conventional electric cords fixedly attached thereto.

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It is thus an object of the present invention to provide an electrical accessory enabling an electric cord to be connected with the mains supply, while allowing the electric cord to be easily detached from the mains supply
20 in appropriate circumstances. It is also an object of the present invention to provide an electrical accessory having additional safety feature(s) and to provide additional convenience to users. The present invention at least provides the public with an alternative way of
25 addressing the shortcoming.

SUMMARY OF THE INVENTION

According to the present invention, there is provided an electrical accessory comprising releasably

5 engageable first and second body members, the first body member including a receiving portion adapted to be releasably engageable with a plug member of an electric cord of an electric appliance, the second body member including a first plug member being electrically
10 connectable with an electricity mains supply, a second plug member adapted to be releasably engageable with the first body member and an electric cord electrically connecting the first and second plug members, and a securing means for securing (and preferable fixedly
15 securing) the first body member to a surface on which the appliance is rested. The accessory thus provides a safety feature, e.g. in the event that the electric cord is accidentally tripped over, the appliance connected to the accessory would not be affected.

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Preferably, the second plug member may be connectable with the first body member by a magnetic force. In particular, the second plug member may be disconnectable from the first body member upon pulling of
25 and/or accidental tripping over the electric cord. In use, the second plug member may be securely connected with the first body member by default, and only when the second plug member or the electric cord is intentionally pulled or accidentally tripped over it is dis-connected
30 therefrom.

5 Suitably, the securing means may be a clamp for safely securing the first body member to a surface, e.g. a surface of a kitchen countertop. The securing means may also be a suction cup. Alternatively, the suction cup may be a double-sided adhesive tape.

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Advantageously, the electric cord may have a suitable length such that the main body thereof may be located reasonably far away from the electricity mains supply on a wall. In particular, the electric cord may
15 be at least three feet. The electrical accessory with this length of an electric cord may act as an extension cord as well.

The electrical accessory may comprise a safety
20 feature in which the second plug member includes a grounding pin.

The electrical accessory may comprise an additional safety feature in which the second plug member includes
25 at least one grounding plate arranged at a side of the second plug member, wherein the grounding plate is engaged with a grounding contact of the first body member when the second plug member is engaged with the first body member. In particular, the second plug member may
30 include two grounding plates. The grounding plates may

5 be conveniently arranged at opposite sides of the second plug member.

BRIEF DESCRIPTION OF THE DRAWINGS

A preferred embodiment of the present invention will
10 now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a schematic view showing an electrical accessory, which is an adapter, according to the present invention and an electrical appliance connected to the
15 adapter;

Figure 2 shows a perspective view of part the electrical adapter shown in Figure 1;

Figure 3 shows another perspective view of part of the electrical adapter shown in Figure 1;

20 Figure 4 is a cross section view of the electrical adapter shown in Figure 3; and

Figure 5 is a perspective view of different parts of the electrical adapter shown in Figure 1.

25 DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT OF

THE INVENTION

An electrical accessory according to a preferred embodiment of the present invention, being an electrical adapter, and functions as an electrical extension cord as
30 well, generally designated as 2, is shown in Figs. 1 to

5 5. In Fig. 1, the electrical adapter 2 is shown as
connected with a plug 4 of an electric cooking range 6.
The adapter 2 generally comprise of two main parts, a
main body 8 and an electric cord 10 having two plugs 12,
14 at their ends.

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The plug 12 of the electric cord 10 is connectable
to an electricity mains supply 16, as shown in Fig. 1.
As shown in Figs. 3 and 5, the plug 14 of the electric
cord 10 is connectable with a receptacle 18 of the main
15 body 8 of the adapter 2. The receptacle 18 is provided
with two parallel metallic plates 20, 22 each embracing a
magnet (not shown), and the plug 14, as shown in Fig. 5,
is provided with a metallic member 24 attractable to the
metallic plates 20, 22. Mainly because of the magnetic
20 force between the metallic plates 20, 22 and the metallic
member 24, the plug 14 and the receptacle 18 stay engaged
as shown in Fig. 1. The characteristics of the
receptacle 18 of the main body 8 and the plug 14 are
generally similar to that of the receptacle 98 and the
25 plug 6, respectively, disclosed in US Patent No.
6,568,942.

The main body 8 of the adapter 2 is provided with a
receptacle 26 with which the plug 4 of the electrical
30 appliance 6 is engaged, as shown in Figs. 1 and 2.

5 As shown in Fig. 3, three pins 28, 30, 32 protrude from the receptacle 18, with the middle pin 30 being a pin for providing grounding for safety reason. As shown in Figs. 1, 3 and 5, the adapter 2 is also provided with a clamp 34, which is generally known as a G-clamp, for
10 fixedly securing the main body 8 of the adapter to the surface of a kitchen countertop. Alternatively, a suction cup may be used to secure the adapter 2 to the surface, as shown in Figs. 3 and 4.

15 Although not shown in the figures, the plug 14 is provided with two grounding plates on opposite sides thereof. The receptacle 18 provides two matching grounding contacts corresponding to the grounding plates. In the event that the grounding pin 30 does not provide
20 complete grounding to the adapter 2, the grounding plates and contacts will provide additional grounding.

 In use, the electric appliance 6 is operational when the plug 4 is engaged with the adapter 2 and the plugs 12
25 and 14 are connected to the receptacle 18 and the main supply 16 respectively, as shown in Fig. 1. If the electric cord 10 is accidentally tripped over, the main body 8 of the adapter 2 and the electric cooking range 6 remain unaffected. This is particularly important, for
30 example, if a cooking appliance is used to provide

5 heating to deep frying cooking, because otherwise hot oil
from the deep frying could be spilled over and cause very
serious injuries. It can be understood that the adapter
2 is also particularly suitable for use when the electric
cord of the electric appliance 6 is not sufficiently long
10 and the appliance 6 is to be located far away from the
mains supply 16 in use. One characteristic of the
adapter 2 is that it provides a safe "engageable-and-dis-
engageable" feature and at the same time meets the needs
of a user when the electric appliance is to be used far
15 away from the mains supply.